IN THE CLAIMS:

Please amend the claims set forth below.

1-52. (Canceled)

53. (New) A composition of matter for modulating an immune response in a subject to a target antigen, the composition comprising uncultured antigen-presenting cells or their precursors, which have not been subjected to activating conditions, and which have been contacted with an antigen corresponding to the target antigen for a time and under conditions sufficient to express a processed or modified form of the antigen for presentation to the subject's immune system.

54. (New) A composition according to claim 53, wherein the uncultured antigen-presenting cells or their precursors are contacted with the antigen from about 1 minute to about 5 days.

55. (New) A composition according to claim 53, wherein the uncultured antigen-presenting cells or their precursors are selected from whole blood, fresh blood, or fractions thereof.

56. (New) A composition according to claim 55, wherein fractions are selected from peripheral blood mononuclear cells, buffy coat fractions of whole blood, packed red cells, irradiated blood, dendritic cells, monocytes, macrophages, neutrophils, lymphocytes, natural killer cells and natural killer T cells.

57. (New) A composition according to claim 53, wherein the antigen corresponding to the target antigen is selected from: nucleic acids; peptides; hormones; whole protein antigens; cellular material; particulate matter selected from cell debris, apoptotic cells, lipid aggregates, membranous vehicles, microspheres, heat aggregated proteins, virosomes, virus-like particles; and whole organisms selected from bacteria, mycobacteria, viruses, fungi, protozoa or parts thereof.

58. (New) A composition according to claim 53, wherein the antigen is selected from a proteinaceous molecule or a nucleic acid molecule.

59. (New) A composition according to claim 53, wherein the uncultured cells are contacted with two or more antigens.

60. (New) A composition according to claim 59, wherein the antigens are in a form selected from overlapping peptides, non-overlapping peptides, one or more polynucleotides from which overlapping peptides are expressible or one or more polynucleotides from which non-overlapping peptides are expressible.

61. (New) A composition according to claim 53, wherein the uncultured cells are contacted with at least one set of peptides, wherein individual peptides of a respective set comprise different portions of an amino acid sequence corresponding to a single polypeptide of interest and display partial sequence identity or similarity to at least one other peptide of the same set of peptides.

62. (New) A composition according to claim 61, wherein at least 2 sets of peptides are employed, and wherein peptide sequences in each set are derived from a distinct polypeptide of interest.

63. (New) A composition according to claim 61, wherein the partial sequence identity or similarity is contained at one or both ends of an individual peptide.

64. (New) A composition according to claim 61, wherein the length of the peptides is selected to enhance the production of a cytolytic T lymphocyte response.

65. (New) A composition according to claim 61, wherein the length of the peptides is selected to enhance the production of r a T helper lymphocyte response.

66. (New) A composition according to claim 61, wherein the peptide sequences are derived from at least about 30% of the sequence corresponding to the polypeptide of interest.

67. (New) A composition according to claim 61, wherein the polypeptide of interest is an antigen selected from a protein antigen, an antigen expressed by cancer cells, a particulate antigen, an alloantigen, an autoantigen or an allergen, or an immune complex.

68. (New) A composition according to claim 61, wherein the polypeptide of interest is a polypeptide producted by a pathogenie organism or a cancer.

69. (New) A process for producing antigen-presenting cells for modulating an immune response to a polypeptide of interest, the process comprising contacting a population of uncultured antigen-presenting cells or their precursors, which have not been subjected to activating conditions, with an antigen corresponding to the target antigen for a time and under conditions sufficient to express a processed or modified form of the antigen for presentation to the subject's immune system.

70. (New) A process according to claim 69, wherein the population is a heterogeneous population selected from whole blood, fresh blood, or fractions thereof selected from peripheral blood mononuclear cells, buffy coat fractions of whole blood, packed red cells, irradiated blood, dendritic cells, monocytes, macrophages, neutrophils, lymphocytes, natural killer cells or natural killer T cells.

71. (New) A method for modulating an immune response to a target antigen, comprising administering to a patient in need of such treatment a composition according to claim 53 or a population of uncultured antigen-presenting cells produced according to the process of claim 69.

72. (New) A method for treatment and/or prophylaxis of a disease or condition associated with the presence of a target antigen of interest, comprising administering to a patient in need of such treatment or prophylaxis an effective amount of antigen-presenting cells or their precursors, which have not been subjected to activating conditions and which have been contacted with an antigen that corresponds to the target antigen for a time and under conditions sufficient to express a processed or modified form of the antigen for presentation to the subject's immune system.